MVP 104GX
Multi Video Processor

SIS™ Simple Instruction Set

DESCRIPTION

The Extron **MVP 104GX** Multi Video Processor allows the display of up to four full motion video signals simultaneously on a single screen for more powerful communications. Videoconferencing and distance learning applications benefit from the MVP 104GX's independent input sizing and advanced decoding using a three-line adaptive comb filter. The MVP 104GX allows participants at the far end of a videoconference to view multiple images on one screen. This capability enables one or more participants at the near end to remain on screen for face-to-face discussion while computer-video or other images are displayed. Each video window can be independently scaled, positioned, or overlapped, so the user may display different window configurations such as picture-in-picture (PIP) or quad splitting. Horizontal and vertical sizing, positioning, and blanking controls are provided for each source. The windows can be labeled using up to 16 alphanumeric characters for on-screen identification, and a background color may be chosen to fill any unoccupied area. Genlock capability enables use in systems that require synchronous timing to an external reference.

The MVP 104GX is compatible with NTSC or PAL signals and offers both composite and S-video inputs. Images are routed from sources such as document cameras, videoconference codecs, VCRs, or DVD players. For images with audio, the MVP 104GX features a four input, one output stereo audio switcher for routing audio associated with any video input.

Three multi-image outputs are available simultaneously as two composite video outputs and one S-video output. The MVP 104GX features 20 factory and 24 user presets for convenient, one-touch selection of different windowing configurations during videoconferencing presentations.

FEATURES

- **Inputs —** Accepts up to four NTSC or PAL video inputs: two inputs accept composite video or S-video and two inputs accept composite video only.
- **Multi image outputs —** Three multi-image outputs provided simultaneously: two composite video outputs on BNC connectors and one S-video output on a 4-pin mini DIN connector.
- **Picture controls —** Provides horizontal and vertical sizing, positioning, and blanking controls for each window.
- **Freeze control —** Includes freeze function to freeze individual windows of the multi-image output. Freezing all windows simultaneously is available through RS-232.
- **Factory and user memory presets —** 20 factory and 24 user memory presets are provided for one, two, three, or four window display outputs. Presets include horizontal and vertical sizing, positioning, blanking, and priority settings for all windows.
- **Blanking control —** Variable horizontal and vertical blanking for each window allows users to add black bars at the top, bottom, left, and right edges of the window to eliminate edge noise.
- **Audio switching —** Features a 4x1 stereo audio switcher with captive screw connectors for selecting the desired audio of any video input.
- **Front panel input and preset labels —** For easy recognition of input and preset buttons, the MVP 104GX allows the user to insert custom defined labels printed using Extron Windows®-based software, which provides text and/or graphics on customized labels.
- **Genlock —** All video outputs (NTSC and PAL) can be synchronized to an outside reference signal, enabling clean and precise transitions between sources.
- **RS-232 remote control —** Extron Simple Instruction Set (SIS™) is provided for RS-232 control via the Extron Windows®-based control program or third-party control.
- **Front panel security lockout —** This feature locks out front panel adjustments; all functions, however, remain active through RS-232 control.
- **Rack-mountable —** The MVP 104GX is housed in a 2U, full rack width metal enclosure.
- **Internal international power supply —** 100-240 VAC, 50/60 Hz, autoswitchable internal power supply provides worldwide power compatibility.

MODEL / PART

MODEL	PART #
MVP 104GX	60-320-02

OPTIONAL ACCESSORIES

SVHS 6' male-to-male S-video cable .....26-316-02 (page 524)
IPL T S2 .....60-544-01 (page 317)
VSC 500 .....60-476-01 (page 421)
BBG 6 A Blackburst Audio Generator .....60-535-01 (page 454)

SPECIFICATIONS

VIDEO

Gain	Unity
Differential phase error	1.5° at 3.58 MHz and 4.43 MHz
Differential gain error	1.5% at 3.58 MHz and 4.43 MHz

VIDEO INPUT AND LOOP-THROUGH

Number/signal type	4 S-video, 8 NTSC/PAL composite video
Connectors	(4) 4-pin mini DIN female — S-video
	8 BNC female — composite video
Nominal level	1 Vp-p for Y of S-video and for composite video
	0.3 Vp-p for C of S-video
Minimum/maximum levels	2.0 Vp-p
Impedance	75 ohms
Vertical frequency	50 Hz to 60 Hz

VIDEO PROCESSING

Encoder	10 bit digital

VIDEO OUTPUT

Number/signal type	1 S-video, 2 composite video
Connectors	(1) 4-pin mini DIN female — S-video
	2 BNC female — composite video
Nominal level	
S-video	1.0 Vp-p Y, 0.288 Vp-p C (burst)
Composite video	1.0 Vp-p
Minimum/maximum levels	
S-video	Y: 0.5V to 2.0 Vp-p
	C: 0.2V to 0.6 Vp-p
Composite video	0.5V to 2.0 Vp-p
Impedance	75 ohms

CONTINUED ON NEXT PAGE...

Extron® Electronics
USA 714.491.1500 (800.633.9876) Asia +65.6383.4400
Europe +31.33.453.4040 (+800.3987.6673) Japan +81.3.3511.7655

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MVP 104GX (continued)...

SYNC
- Standards ..... NTSC 3.58, PAL

AUDIO
- Gain ..... Unbalanced output: 0 dB; balanced output: +6 dB
- Frequency response ..... 20 Hz to 20 kHz, ±0.05 dB
- THD + Noise ..... 0.03% @ 1 kHz at nominal level
- S/N ..... >90 dB, output +21 dBu, balanced, maximum output (unweighted)
- Crosstalk ..... <-80 dB @ 1 kHz
- Stereo channel separation ..... >80 dB @ 1 kHz
- CMRR ..... >75 dB @ 20 Hz to 20 kHz

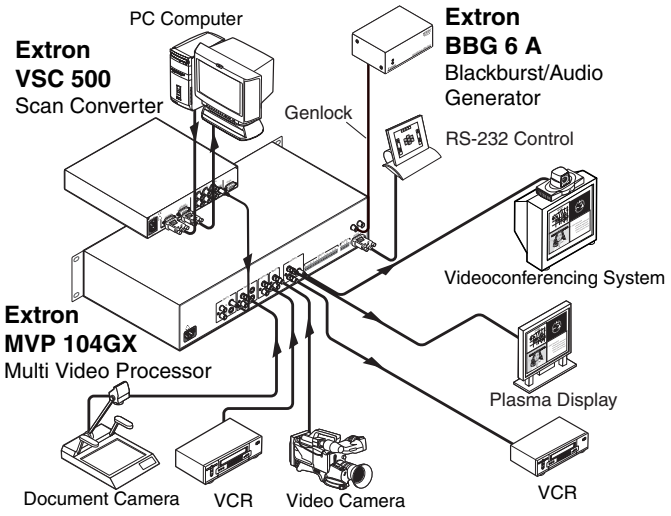
AUDIO INPUT
- Number/signal type ..... 4 stereo, balanced/unbalanced
- Connectors ..... (4) 3.5 mm captive screw connectors, 5-pole
- Impedance ..... >50 kohms unbalanced, 25 kohms balanced, DC coupled
- Nominal level ..... -10 dBV (316 mVrms)
- Minimum level ..... -10 dBu for full power out
- Maximum input level ..... +19.5 dBu (balanced/unbalanced) @ 1%THD+N
- Input gain adjustment ..... -15 dB to +9 dB, adjustable per input via RS-232 or front panel

AUDIO OUTPUT
- Number/signal type ..... 1 stereo, balanced/unbalanced
- Connectors ..... (1) 3.5 mm captive screw connector, 5-pole
- Impedance ..... 50 ohms unbalanced, 100 ohms balanced
- Gain error ..... ±0.1 dB channel to channel
- Maximum level (Hi-Z) ..... >+21 dBu, balanced at stated %THD+N
- Maximum level (600 ohm) ..... >+15 dBu, balanced at stated %THD+N

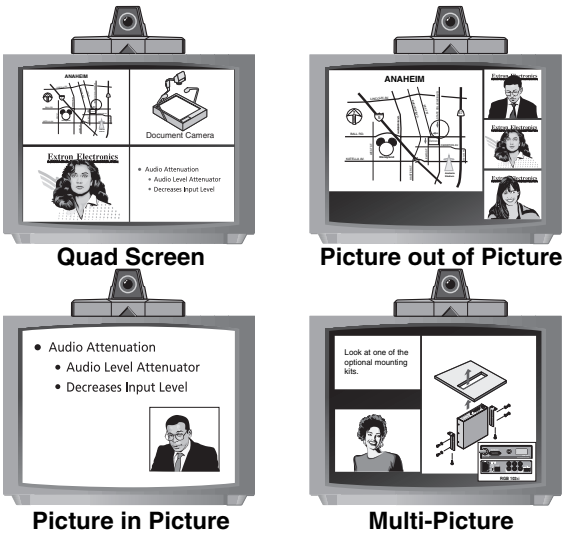
CONTROL/REMOTE — VIDEO PROCESSOR
- Serial control port ..... RS-232/RS-422, 9-pin female D connector
- Program control ..... Extron's control/configuration for Windows®
  Extron's Simple Instruction Set (SIS™)

GENERAL
- Power ..... 100 VAC to 240 VAC, 50/60 Hz, 40 watts, internal, autoswitchable
- Rack mount ..... Yes
- Enclosure type ..... Metal
- Enclosure dimensions ..... 3.4" H x 17.5" W x 9.5" D (2U high, full rack width)
  8.6 cm H x 44.4 cm W x 24.1 cm D
  (Depth excludes connectors and knobs. Width excludes rack ears.)
- Product weight ..... 6.9 lbs (3.2 kg)
- Shipping weight ..... 13 lbs (5.9 kg)
- Listings/Compliances ..... UL, CUL, CE, FCC Class A
- Warranty ..... 3 years parts and labor

APPLICATION



Output Examples



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